



Washington State

Marine Debris Response Plan

September 2012



NOTE: This is a living document, subject to changes and modifications as best practices are acquired and lessons are learned.

Cover Photo:

Marine debris found at Benson Beach on Cape Disappointment
Taken by Chuck Matthews, WA State Dept. of Ecology, June 15, 2012

September 2012

c/o Washington State Military Department
Emergency Management Division
Camp Murray, WA 98430

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RECORD OF REVISIONS

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COMMENT FORM

Washington State Marine Debris Response Plan			
Comment Form			
Last Name:		First Name:	
Phone Number:		Email Address:	
Representing:	State Agency <input type="checkbox"/> Local Jurisdiction <input type="checkbox"/> Business <input type="checkbox"/>		
Entity Name:	Date:		
Section Name/Header	Page #	Comments	
Email form to: lisa.johnson@mil.wa.gov or fax to: 253-512-7206			

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1. INTRODUCTION

1.A. PURPOSE

The purpose of this plan is to coordinate federal, state and local activities to monitor and assess the Japan tsunami marine debris along the Washington State coast; minimize the risk of injury from large debris and contaminants; prevent the establishment of high risk invasive species; minimize impacts to native fish and wildlife and their habitats; and facilitate removal of marine debris as feasible when depositions exceed landowner and existing cleanup capabilities.

Washington State conducted a collaborative effort to develop this Marine Debris Response Plan to address marine debris from the Japan tsunami. After a series of public meetings to provide information and address public questions and concerns, representatives from federal and state agencies, British Columbia and Oregon emergency managers, local and tribal governments, and non-governmental organizations and industries convened a workshop on April 25, 2012, in Ocean Shores, Washington, to discuss the challenges posed by the Japan tsunami marine debris, and craft a Washington State Marine Debris Response Plan.

1.B. SCOPE

This plan is applicable to federal, state, and local governments; Indian tribes and nations; and private and non-profit agencies with an interest in Japanese tsunami marine debris activities. This plan adopts a “whole of government” approach, which is a coordinated method of addressing Japanese Tsunami Marine Debris (JTMD) on all shorelines in Washington State by federal, state, and tribal governments responding to requests for assistance from any governmental entity. This plan is in effect for two years; however, this plan is considered a living document and updates will be made as needed or when required, and this plan period can be extended.

This plan focuses on seven (7) response activities:

- Routine and Small Debris (Section 4.A.)
- Large Onshore Debris (Section 4.B.)
- Hazardous Debris (Section 4.C.)
- Offshore Debris (Section 4.D.)
- Volunteer Coordination and Management (Section 4.E.)
- Invasive Species (Section 4.F.)
- Communications and Outreach (Section 4.G.)

This plan supports the emergency management actions described in the Washington State Comprehensive Emergency Management Plan.

1.C. SITUATION

The devastating earthquake and resulting tsunami that struck Japan on March 11, 2011, generated an estimated total of 25 million tons of debris, and the receding waters carried roughly 5 million tons of debris offshore. While heavier debris sank near shore, the Japanese government estimates that 1.5 million tons of floating debris dispersed in the vast North Pacific Ocean. The remainder has been carried eastward by ocean currents and wind. Regions that could be impacted by the debris are developing response plans, including a range of possible impacts and scenarios.

As of May 31, 2012, reports of high wind-driven marine debris items such as buoys and floats, empty plastic containers and bottles found on Washington State beaches suggest that this debris may have arrived to this area. Similar items were found along the West Coast and Alaska. Some items with identifying markers could be traced back to the tsunami event. National Oceanic and Atmospheric Administration (NOAA) models estimate that high wind-driven debris has arrived during the winter of 2011-2012 while the bulk of the debris is still offshore, north and east of Hawaii.

The Coast Savers' Earth Day 2012 cleanup, a volunteer-based marine debris cleanup spanning the entire outer coast of Washington State, removed a total of 30 tons of debris using over 1,400 volunteers. While above average, this amount is below the maximum of 40 tons removed in 2005, and similar to the amounts removed in 2003 and 2009.

The floating dock section that washed ashore near Newport, Oregon on June 5, 2012 had about 1.5 tons of marine growth, including several species that are classified as high risk in Oregon and more than 15 potentially invasive species in total. If this example of large marine debris is typical of others that will arrive soon, the risk of large-scale invasions of our coastal ecosystems and shellfish growing areas is large.

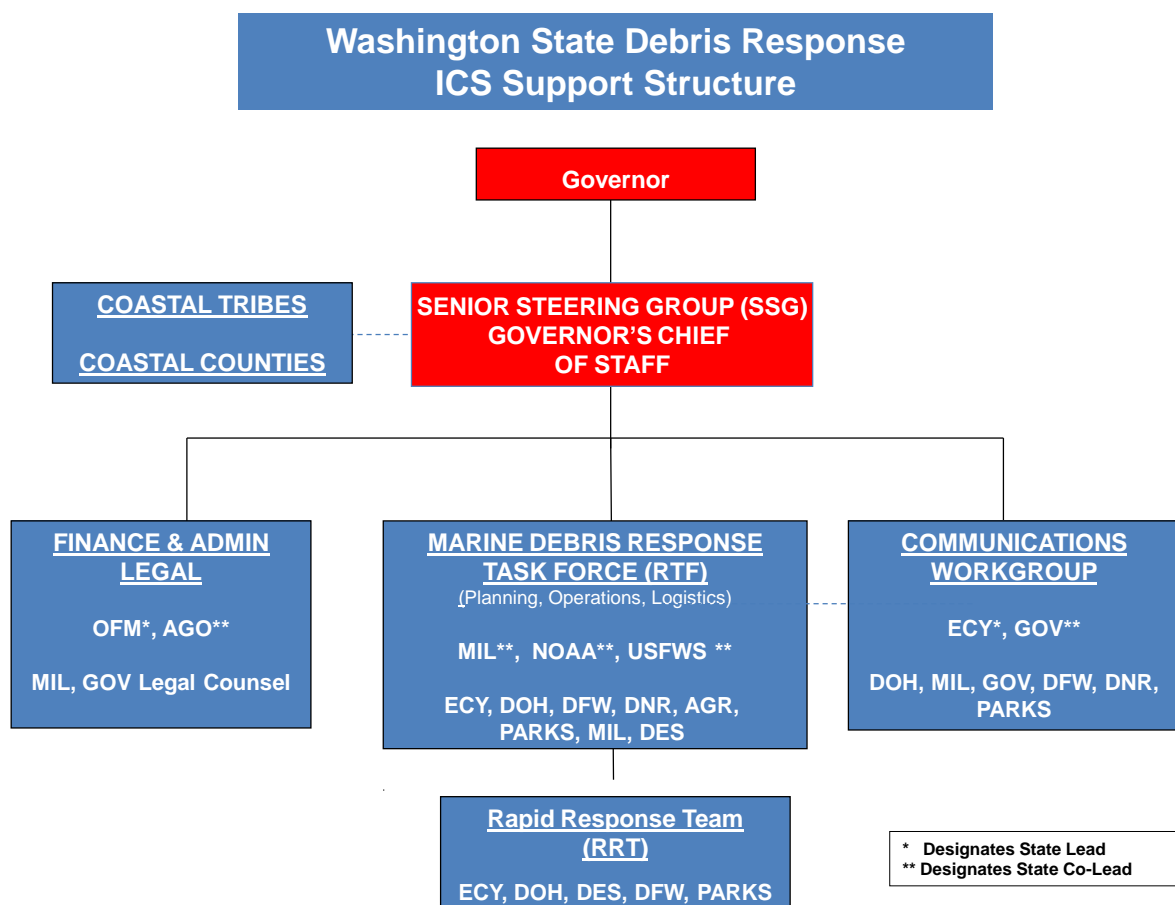
1.D. PLANNING ASSUMPTIONS

This plan operates under several assumptions:

- Local jurisdictions do not have the resources for tsunami-related debris cleanup.
- No one agency is staffed, equipped, or funded at a level to solely address this problem. Hence, this effort will rely on the "whole of community" approach for success.
- Neither federal nor state funding is assured to assist with marine debris removal.
- Coordinated support from local, state, and federal and state agencies is available.
- The expected quantity of tsunami-related debris is unknown.
- Not all shorelines are readily accessible for monitoring and debris removal.
- Private landowners are not responsible for securing, decontaminating or removing large onshore or hazardous debris.

2. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

2.A. RESPONSE PLAN ORGANIZATION



2.B. SENIOR STEERING GROUP (SSG)

Senior Steering Group is made up of directors of the state agencies that have the responsibility to respond to marine debris issues. They provide overall policy direction for the state's response to marine debris.

- Washington State Office of the Governor
- Washington State Military Department, Emergency Management Division
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Parks and Recreation Commission
- Washington State Department of Natural Resources
- Washington State Office of Financial Management

- Washington State Department of Agriculture
- Washington State Department of Health
- Washington State Department of Enterprise Services
- Governor's Office of Indian Affairs
- Washington State Commission on Asian Pacific American Affairs

2.C. MARINE DEBRIS RESPONSE TASK FORCE (RTF)

The Marine Debris Response Task Force is the group charged with applying the combined resources of federal, state, local, tribal governments, private industry, and concerned citizens to the safe and timely removal of debris from coastal waters and shorelines up to the high water mark.

- Washington State Department of Agriculture
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Health
- Washington State Military Department, Emergency Management Division
- Washington State Department of Natural Resources
- Washington State Office of Financial Management
- Washington State Department of Enterprise Services
- Washington State Office of the Governor
- Washington State Parks and Recreation Commission
- National Oceanic and Atmospheric Administration
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Olympic National Park

2.D. RAPID RESPONSE TEAM (RRT)

The Rapid Response Team (RRT) is comprised of subject matter experts of agencies who have a response role in dealing with large or hazardous items of marine debris or those containing potentially invasive species.

The following agencies staff the RRT:

- Washington Military Dept., Emergency Management Division (State Lead)
- Washington State Department of Ecology (Hazardous Materials and External Affairs)
- Washington State Department of Fish and Wildlife (Invasive Species)

- Washington State Parks and Recreation Commission (Landowner)
- Washington State Department of Health (Radioactive Substances)
- Washington State Department of Natural Resources (Derelict Vessels)
- Washington State Department of Enterprise Services (Service Contracts)
- National Oceanic and Atmospheric Administration (Federal Marine Debris Lead)

Most marine debris is of the Class 1 (can be carried by one person) or Class 2 (can be carried by two people) which can be safely removed from beaches with minimal gear. Class 3 and larger marine debris (such as the 7 meter vessel that washed ashore at Cape Disappointment State Park) will require a government response by staff equipped with specialized tools and equipment and who have specialized knowledge and training.

Response on State-Owned Land

Word of a landfall of large marine debris may come from a citizen or from a local, state, or federal official to the state marine debris lead or designee. This information may also come from the State Emergency Operations Officer (SEOO). When informed of Class 3 or larger debris on state-owned property:

- The State Lead (or designee) will convene the RRT (either telephonically or in person) and based on the information available, decide which RRT elements will deploy.
- The State Lead (or designee) will decide who will be the state's on-scene incident commander (IC).
- Once on-scene, the IC can coordinate with the State Lead regarding any requirements for additional responders from the RRT or the release of unneeded resources.
- The IC, through coordination with the State Lead, may also draw on resources outside of the RRT when they are needed.
- The prime mission of the IC will always be public health and safety.

After hours and on weekends, SEOOs in the State Emergency Operations Center at Camp Murray can activate the RRT by contacting the State Lead or alternates who will in turn contact members of the team. The team will confer telephonically to plan the response.

Response on Federal or Tribal-Owned Land

The RRT will not respond to debris on federal or tribal land unless invited by the landowner. Under those circumstances the team will only respond when accompanied by a representative of the landowner who is endowed with the authority to either support or veto decisions made by the RRT. The RRT will be augmented with resources (staff and equipment) from the landowner in keeping with the "whole of government" approach embodied in the plan.

2.E. AUTHORITIES AND REFERENCES

STATE

- RCW 36.125 – Marine resource committees.
- RCW 38.52.105 – Disaster response account.
- RCW 43.220 – Washington conservation corps.
- RCW 70.98.050 – State radiation control agency.
- RCW 70.105D.070 – Toxics control accounts.
- RCW 79A.05.610 – Jurisdiction over and administration of area (Seashore Conservation Area).
- RCW 90.56 – Oil and hazardous substance spill prevention and response.
- WAC 118-04 – Emergency worker program.
- WAC 173-303 – Dangerous waste regulations.
- WAC 173-303-050 – Department of ecology cleanup authority.
- WAC 173-303-900 – Public involvement and participation.
- WAC 173-350 – Solid waste handling standards.

FEDERAL

- Marine Protection, Research, and Sanctuaries Act (1972)
- National Parks Service, 16 U.S.C. 1 *et seq.*
- Olympic Coast National Marine Sanctuary, 15 C.F.R. 922.150 *et seq.*
- Wilderness Act, 16 U.S.C. 1133–1136

2.F. FEDERAL AGENCY RESPONSIBILITIES

National Oceanic and Atmospheric Administration (NOAA)

- Federal lead for coordination of marine debris related activities, including Japan tsunami marine debris.
- Funds marine debris assessment and removal projects, mostly through grants.
- Collects sighting reports to disasterdebris@noaa.gov logs and processes this data. *See Attachment B for the NOAA Shoreline Monitoring Program outline.*
- Provides modeling information for Japan tsunami marine debris movement at sea. Coordinates, funds, and manages the shoreline survey efforts. *See Attachment C for the NOAA Japan Tsunami Marine Debris Modeling Program outline.*
- Coordinates satellite detection of Japan tsunami marine debris at sea.
- Oversees and coordinates all response and cleanup activities within the Olympic Coast National Marine Sanctuary.
- Provides Scientific Support Coordination to the Coast Guard.

- Collaborates with state, counties, tribes and NGOs to provide outreach and address concerns.
- Supports the planning process in all states potentially impacted by Japan tsunami marine debris.
- Provides outreach coordination, material, and an informational website.

U.S. Coast Guard

- Works as a supporting agency to NOAA, state and local agencies with a focus centered on notification and reporting of navigational hazards.
- Develops and issues, when appropriate, Broadcast Notice to mariners or mark obstructions to advise vessel traffic of potential hazards to navigation.
- Maintains a year-round, twenty-four hour telephone watch for the National Response Center.
- Enters telephonic reports into the Incident Reporting Information System (IRIS) and relays each report to appropriate federal and state agencies.
- Destroys or sinks hazards to navigation at sea, under certain circumstances.
- Supports outreach efforts.

U.S. Environmental Protection Agency

- Responds to oil and hazardous material releases or threats of release if they are on the inland side of the high tide line, to include tribal lands.
- Grants permits for intentional scuttling of vessels (in accordance with the Marine Protection, Research and Sanctuaries Act – Ocean Dumping Act).
- Supports the U.S. Coast Guard and state for response to potentially hazardous material on the beach by providing air monitoring and sampling, including radiation monitoring and support.
- Provides technical support to tribes.
- Supports outreach efforts.

Olympic National Park

- As a landowner, coordinates and manages marine debris assessment and cleanup within the park boundaries. *See Attachment D – Map of Federal-Owned Lands.*
- Issues permits for park shorelines where applicable.
- Reports to NOAA on quantities and location of marine debris surveyed and removed.
- Advises NOAA and the state if marine debris is beyond current capacities to remove.
- Supports outreach efforts.

U.S. Fish and Wildlife Service

- Coordinates with NOAA and Washington State Department of Fish and Wildlife to minimize impacts to threatened and endangered species, migratory birds, and their habitats.
- As a landowner, coordinates and manages marine debris assessment and cleanup in national wildlife refuges.
- Issues Special Use Permits for national wildlife refuge shorelines where applicable.
- Reports to NOAA on quantities and location of marine debris surveyed and removed.
- Advises NOAA and the state if marine debris is beyond current capacities to remove.
- Supports outreach efforts.

U.S. Army Corps of Engineers

- Responds to marine debris removal at sea when debris interferes with port or shipping activity.

Federal Emergency Management Agency

- Provides funding and other support during declaration of emergency.
- Supports volunteer management.

2.G. INDIAN TRIBES AND NATIONS

Hoh Tribe, Jamestown S’Klallam Tribe, Lower Elwha Tribe, Makah Tribe, Quileute Tribe, Quinault Nation, and Shoalwater Bay Tribe

- As landowners, coordinate and manage marine debris assessment and cleanup in the area of their jurisdiction. *See Attachment D – Map of Federal-Owned Lands.*
- Coordinate with U.S. Environmental Protection Agency and U.S. Coast Guard for removal of hazardous marine debris items.
- Manage solid waste hauling and disposal within their jurisdictions.
- Report to NOAA on quantities and location of marine debris surveyed and removed.
- Advise NOAA and the state if marine debris is beyond current capacities to remove.
- Support outreach efforts.

2.H. STATE AGENCY RESPONSIBILITIES

Washington State Department of Ecology

- Serves as the lead state agency for communications with the public and media.
- Serves as the lead state agency for public outreach.
- Serves as the lead state agency for removal of large marine debris.

- Serves as the lead state agency for solid and waste management.
- Serves as the lead state response agency for oil spills and hazardous material releases.
- Houses the Washington Conservation Corps (WCC), which can be mobilized to assist with cleanup efforts.
- May serve as the conduit for federal funding, and provide limited state funding for cleanup operations.

Washington State Department of Enterprise Services

- Serves as the lead state agency for contracting with the private sector for specialized services such as large marine debris breakup and removal.
- May provide first responder capability for initial assessment of risk status of debris.
- Can assist with volunteer and donations management.

Washington State Department of Fish and Wildlife

- Coordinates with NOAA, U.S. Department of Ecology, U.S Coast Guard and other spill responders to assess impacts of contaminant spills to wildlife.
- Coordinates with NOAA and U.S. Fish and Wildlife Service, as appropriate, when federally listed species or designated critical habitat is adversely affected.
- Serves as the lead state agency for aquatic invasive species; provide expertise on risk assessment, prevention and decontamination. Has decontamination equipment.
- May provide first responder capability for conducting initial assessment of risk status of debris as well as addressing public safety concerns.
- Coordinates debris removal with Marine Resource Committees.
- Supports outreach efforts.
- Responds to wildlife injuries and deaths caused by marine debris.
- Processes Hydraulic Project Approvals, where applicable.
- Contributes scientific expertise to long-term monitoring efforts.
- Administers Snowy Plover beach closures.

Washington State Department of Health

- Serves as the lead state agency for radiation monitoring and detection.
- Serves as lead state agency for shellfish protection and commercial growing facilities.
- Collaborates with federal and state agencies on outreach and communication.
- Supports outreach efforts.

Washington State Military Department, Emergency Management Division

- Serves as the lead state agency for coordinating marine debris activities.
- Serves as the lead state agency for volunteer coordination.
- Serves as the lead state agency for coordination and support of marine debris removal activities when local capacity is exceeded.
- Serves as the conduit for federal funding, if available.
- Serves as the lead state agency for communications to the State Legislature and elected officials.
- Coordinates and facilitates the drafting and updates of the State Marine Debris Response Plan.
- Activates the National Donations Management Network if needed and implements the Emergency Worker Program.
- Coordinates communications among state agencies regarding marine debris operations.

Washington State Department of Natural Resources

- Manages submerged lands in front of the Seashore Conservation Area from the extreme low tide line out to three nautical miles offshore.
- Within Willapa Bay, Grays Harbor, and the Strait of Juan de Fuca, manages submerged lands and those tidelands that had not historically been sold into private ownership.
- Coordinates with state agencies, the National Park Service, the Olympic Coast National Marine Sanctuary and tribal governments.
- Administers the state's Derelict Vessel Removal Program, under which Washington State Department of Natural Resources, Washington State Parks and Recreation Commission, Washington Department of Fish and Wildlife, local governments and port districts all qualify as Authorized Public Entities that can take action against derelict vessels.
- All entities can use state contract 05511 for emergency and planned vessel removals.

Washington State Office of Financial Management

- Serves as the lead state agency for accessing Governor's Emergency Fund as needed to implement the plan.
- Coordinates overall funding and budget requests for plan implementation.

Washington State Parks and Recreation Commission

- Manages the Seashore Conservation Area (high tide line westward to the extreme lowest water line from the Quinault Indian Reservation south to the Cape

Disappointment) and helps coordinate and manage marine debris assessment and cleanup along the outer coast.

- May provide initial response and emergency hazard assessment and mitigation.
- Supports outreach efforts and cooperation with volunteer groups.

2.1. LOCAL JURISDICTION RESPONSIBILITIES

County Emergency Management Offices

- Acts as first responders to reports of debris on the beach. *See Attachment E – Map of Washington State Counties.*
- Provides information and outreach to the general public.
- Coordinates with the state and NOAA on outreach, and marine debris planning and response.
- Supports outreach efforts.

Marine Resources Committees

- Supports volunteer-based coastal cleanup.
- Participates in shoreline monitoring.
- Supports outreach efforts.

County Public Works and Local Environmental Health Jurisdictions

- Assists with coordinating disposal of non-hazardous solid waste.
- Issues permits for temporary solid waste accumulation sites if necessary.
- Participates in development of local response plans.
- Provides information to state and federal agencies to facilitate Class 1 debris removal.
- Cooperates with state and federal programs to dispose of large volumes of Class 1 debris and Class 2 debris.

Local Cities and Towns

- Assists with coordinating disposal of non-hazardous solid waste.
- Issues permits for temporary solid waste accumulation sites if necessary.
- Participates in development of local response plans.
- Provides information to state and federal agencies to facilitate Class 1 debris removal.
- Cooperates with state and federal programs to dispose of large volumes of Class 1 debris and Class 2 debris.

2.J. PRIVATE LANDOWNERS

- As landowners, coordinate and manage routine marine debris on their lands.
- Private landowners should contact the Washington State Department of Ecology if debris becomes more than they can handle or if large marine debris needs assessment and removal. A message can be left at 1-855-WACOAST.
- If debris with invasive species is suspected, the landowner should contact the Washington State Department of Fish and Wildlife Aquatic Invasive Species Unit at 1-888-WDFW-AIS (1-888-933-9247).
- If debris containing hazardous materials is suspected, the landowner should call 1-855-WACOAST (1-855-922-6278).

3. CONCEPT OF OPERATIONS

3.A. PLAN DEVELOPMENT AND MAINTENANCE

This plan is a living document, and is subject to change as additional information becomes available and updates are needed. The plan will be maintained by Washington Military Department, Emergency Management Division (EMD), and will be updated as follows:

- Urgent updates: Suggested updates and changes to the plan that need to be implemented quickly will be discussed at the next scheduled Response Task Force (RTF) meeting and, if approved, implemented afterward.
- Routine changes: The plan will be reviewed quarterly. Suggestions and recommendations to improve the plan will be logged by EMD, and discussed at the next scheduled RTF meeting.
 - The RTF will forward revisions to the Senior Steering Group for their approval.
- The plan and subsequent versions will be posted on the Washington State Department of Ecology website at http://www.ecy.wa.gov/news/2012/itn01_debris.html.

3.B. FUNDING FOR RESPONSE ACTIVITIES

The Governor has allocated \$500,000 from the Governor's Emergency Fund for deposit into the Disaster Response Account, which is administered by the state Military Department, to be used for marine debris related expenses.

NOAA has provided a \$50,000 grant to cover the removal of marine debris for cost incurred after September 1, 2012. This grant is administered the Washington State Military Department.

The Military Department, in consultation with the Office of Financial Management, will pursue additional federal funding opportunities as needed and as available. Additional funding may also be pursued through the state budget process, as needed, for costs not covered through federal or other funds.

Criteria for Funding Requests

All expenditures from the Disaster Response Account for responding to marine debris must be reviewed and approved by the Office of Financial Management Director prior to obligation based upon the following criteria:

1. The activity is necessary to implement the Washington State Marine Debris Response Plan.
2. Costs are significantly beyond the level of activity that an agency normally undertakes.
3. The activity is necessary to protect public health, safety, or the environment as a result of the Japanese tsunami.
4. Existing fund sources are not available or allowed to be used for this activity.

Process to Access Disaster Response Account

- Agencies must submit requests to the Office of Financial Management (OFM) Director and Terry Egan at the Washington State Military Department, Emergency Management Division (EMD) Lead. All requests must be signed by the agency director.
- All requests must address the criteria for funding requests as stated above.
- EMD Lead will forward the request to the Marine Debris Response Task Force.
- Agencies may send comments (email, phone) to OFM Budget Division and EMD Lead. These comments will be reviewed and included in OFM staff recommendations to the OFM Director.
- Unless the request is in response to an emergency situation, no decision will be made until at least a week after the request has been received by OFM.
- If approved, OFM would send a notification letter to the agency and cc EMD. This letter will specify the amount and purpose for which the funds may be used.
- If the request is disapproved OFM will notify the requesting agency and provide them an opportunity to appeal directly to the OFM Director.
- Once an amount and purpose has been approved the requesting agency will submit invoices directly to EMD Assistant Director for reimbursement.
- OFM will track allocations and expenditures and provide reports to the Senior Steering Group (SSG) and Tsunami Debris Finance Workgroup.

Process to Access Disaster Response Account

- Agencies must submit requests to EMD lead and copy the Senior Budget Assistant at OFM. All requests must be signed by the agency director.
- All requests must address the criteria for funding requests as stated above and be consistent with federal grant requirements and limitations.
- Once an amount and purpose has been approved by EMD, the requesting agency will submit invoices directly to the EMD Assistant Director for reimbursement.
- OFM will track allocations and expenditures and provide reports to the Senior Steering Group and Marine Debris Response Task Force.

3.C. INTERAGENCY COMMUNICATIONS

Senior Steering Group

- Meets quarterly, in person.
- Meets as needed, by phone or email, to discuss and coordinate issues.
- Receives reports from each responding state agency of their current activities and response.

Marine Debris Response Task Force

- Meets at least once a month.
- Meets as needed, by phone or email, to discuss and coordinate issues.
- Provides twice-monthly reports of planning and response activities to the Senior Steering Group and Governor's Office.
- Shares information, when applicable, with neighboring states, West Coast Governors Alliances, and Pacific Coast Collaborative.

National Oceanic and Atmospheric Administration (NOAA)

- Coordinates with the Japanese Consulate on tsunami-related debris identification and items that may have monetary or sentimental value.
- Modeling: Runs its GNOME model as needed (currently every two weeks, but this schedule may change) and post it on its website at http://marinedebris.noaa.gov/tsunamidebris/debris_model.html .
- Satellite detection: Collaborates with its partners to analyze satellite data to detect large floating debris items. This information will be shared with state agencies during regularly scheduled update meetings, or, if urgent, via email and phone.
- Shoreline monitoring: Information collected from shoreline monitoring will be shared on NOAA's website at <http://marinedebris.noaa.gov/tsunamidebris/monitoring.html> and during team updates.
- Sightings: Logs reports of tsunami debris sightings, and will share these with the Marine Debris Response Task Force during the update meetings.

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4. RESPONSE ACTIVITIES

4.A. ROUTINE AND SMALL DEBRIS

Lead Agency

Washington State Department of Ecology

Supporting Agencies

U.S. Fish and Wildlife Service

Washington State Department of Health

Washington State Parks and Recreation Commission

Federal, State and Private Land Owners

Indian Tribes and Nations

Local Health Jurisdictions

Non-Governmental Organizations

Goal

Remove routine and small non-hazardous debris items to eliminate environmental and safety risks, and the economic impact. Minimize impacts to threatened and endangered species, migratory birds, and their habitats.

Specific Tasks

1. Support existing efforts to remove routine and small non-hazardous marine debris from Washington State's shoreline.
2. Coordinate response to reports of potential hazards associated with removal of routine and small shoreline marine debris.
3. Collaborate with NOAA and other agencies to obtain data on debris trajectories and location to improve planning for shoreline clean-up.
4. Utilize dedicated state and federal funding to provide solid waste drop boxes, bags, and other needed equipment for volunteers assisting in routine and small non-hazardous marine debris removal. These funds will also be used to pay for disposal costs when drop boxes are full.
5. Deploy Washington Conservation Corps to assist with debris removal or other cleanup-related tasks, provided funding is available either by allocation or sponsorship.
6. Continue collaboration with state agencies, NOAA and other federal agencies to support scheduled coastal cleanup efforts to the limit of their capacity.
7. Assist landowners with determining when marine debris quantities significantly exceed typical volumes encountered under ordinary circumstance and the available capacity for removal, hauling, and disposal/recycling.

8. Work with Washington State Department of Fish and Wildlife to assess the level of potential invasive species risk posed by small debris. If there's an elevated risk, modify debris removal plans to incorporate marine debris collection and disposal techniques to minimize risk.
9. Identify tasks that will be eligible to receive financial assistance from Washington State funds made available for response to potential arrival of large amounts of marine debris; estimate costs for eligible tasks; and quantify funding available for such tasks.
10. Develop an outline to assist in the development of county-specific local response plans.
11. Assist in the development of local response plans in communities electing to develop plans that reflect local conditions.
12. Assist with the assessment of needs and circumstances in remote areas that may require special logistical planning to perform cleanup. Such areas may include: Olympic National Park, tribal lands, national wildlife refuges, offshore islands, Willapa Bay, Grays Harbor, and the Strait of Juan de Fuca.

4.B. LARGE ONSHORE DEBRIS

Lead Agency

Washington State Department of Ecology

Supporting Agencies

U.S. Environmental Protection Agency

U.S. Coast Guard

U.S. Fish and Wildlife Service

Washington State Department of Enterprise Services

Washington State Department of Fish and Wildlife

Washington State Department of Health

Washington State Department of Natural Resources

Washington State Parks and Recreation Commission

Washington State Recreation and Conservations Office, Washington Invasive Species Council

Goal

Address large marine debris items to eliminate environmental and safety risks and impediments to beach use.

Specific Tasks

1. The landowner (federal, state, local government or private) should immediately notify the lead tsunami debris federal and state agencies (NOAA Marine Debris Program at DisasterDebris@noaa.gov, National Response Center at 1-800-424-8805, and Department of Ecology at 1-800-258-5990) that a large marine debris item has been found.
2. State EMD will convene the Marine Debris Rapid Response Team (RRT) to help assess whether the item poses an immediate threat to public health, safety, and the environment – particularly potential hazardous material, invasive species, navigation, and radiation risks.
3. On federal and tribal lands, the landowner (e.g., National Park Service, U.S. Fish & Wildlife Services, and tribe) will coordinate financial assistance with Ecology and NOAA (Olympic Coast National Marine Sanctuary), mostly to procure funding for removal and disposal.
4. Deploy Washington Conservation Corps to assist with debris removal or other cleanup-related tasks provided funding is available either by allocation or sponsorship.
5. Petroleum and other hazardous materials may be attached to or part of marine debris. Ecology should inspect items to determine if an emergency environmental response is warranted, including cleanup, decontamination, and disposal procedures.
6. Invasive species may be attached to marine debris. Washington State Department of Fish and Wildlife and other subject matter experts should inspect items and address any invasive species found and provide appropriate decontamination procedures.

7. Until concerns over radiation contamination have been put to rest, radiation spot checks should be conducted to rule out contamination.
8. If there is a very large item, or a significant number of smaller (but still within the category of large debris) items, a State of Emergency declaration may be needed and would involve the Washington State Military Department, Emergency Management Division and/or the Federal Emergency Management Agency.
9. Large debris will probably be “attractive nuisances”; posing a risk to human safety in the surf line or as they settle on the beach. Efforts to keep citizens at a safe distance until the debris has been tested for contaminants, been cleaned of marine growth and stabilized on the beach will be important.
10. State agencies, along with tribal and local law enforcement will coordinate efforts to secure large debris and maintain public safety.
11. If determined appropriate, the State Disaster Account Fund may be accessed to address the disposal of large non-hazardous tsunami debris items.

4.C. HAZARDOUS DEBRIS

Lead Agency

Washington State Department of Ecology

Washington State Department of Health

U.S. Coast Guard

Supporting Agencies

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

Olympic National Park

Goal

Remove and dispose of hazardous and potentially hazardous items (such as spilled oil, fuel tanks and containers, drums, gas cylinders, chemical totes, and other containers) that may hold oil and other petroleum products or be filled with hazardous materials, including potential radioactive hazards.

Specific Tasks

1. When notified, Washington State Department of Ecology and the U.S. Coast Guard, often in collaboration with local, state, tribal and federal agencies, will investigate reports of oil spills and hazardous material releases associated with marine debris items. Both agencies maintain a 24/7 environmental emergency response capability.
2. When Ecology and the Coast Guard determine debris items pose an immediate threat to public health, safety and the environment, the agencies will dispatch environmental emergency response teams to go on-scene to assess risks and determine best strategies to safely remove and dispose of the debris.
3. If Ecology determines a debris item also poses a potential radiation threat, then the Washington State Department of Health will be called in to assist with response.
4. Ecology and the Coast Guard may hire private cleanup contractors to help respond to and remove hazardous debris items.
5. Ecology and the Coast Guard may also notify and activate the Region 10 Regional Response Team as needed.
6. The public should stay away from all hazardous items and not make any attempt to remove this type of debris or open containers holding unknown and potentially hazardous items.
7. Report potentially hazardous debris items immediately to the Washington State Department of Ecology: 1-855-WACOST (1-855-922-6278) and press “1”.
8. Potentially hazardous debris items found on tribal and federal property should be reported immediately to the U.S. Environmental Protection Agency/U.S. Coast Guard’s National Response Center: 1-800-424-8802. Federal and tribal authorities will likely coordinate with Ecology and local fire and law enforcement agencies for assistance.

9. In Washington State, responses to environmental emergency mounted by Ecology are funded by the State Toxics Control Account. The Coast Guard uses federal funds to pay for responding to and removing hazardous or potentially hazardous materials.
10. Washington Department of Enterprises Services has state contracts in place for removal of derelict vessels and large floating debris.

4.D. OFFSHORE DEBRIS

Lead Agency

U.S. Coast Guard

Supporting Agencies

U.S. Army Corps of Engineers

U.S. Environmental Protection Agency

National Oceanic and Atmospheric Administration

Washington State Department of Ecology

Goal

Address large debris items at sea that may pose a threat to navigation or a pollution risk.

Specific Tasks

Large marine debris item found at sea may pose a hazard to navigation or a pollution risk. In the United States, the Coast Guard is the primary agency to address this threat.

1. When notified, the Coast Guard, in collaboration with federal and state agencies, will investigate a floating marine debris item that may pose a hazard to navigation or create pollution risk. Such items may include drifting vessels, floating containers, or leaking drum(s).
2. The Coast Guard may notify and activate the Regional Response Team as needed.
3. An Incident Command structure may be established to best address the situation and facilitate communication between the various agencies.
4. NOAA's Scientific Support Coordinator (SSC) may be activated to support the response. NOAA's Marine Debris Program will assist through the SSC.
5. If a foreign vessel is involved, the Coast Guard contact the country of origin or the country where the vessel is registered for additional information. The owner, if he or she can be traced, should be contacted as well.
6. Large items at sea will be handled on a case-by-case basis, considering factors such as safety, salvaging options, pollution risk, and immediate hazard to navigation.
7. If scuttling a vessel is the preferred option, the U.S. 549 Environmental Protection Agency must be notified and consulted. NOAA will advise on a suitable scuttling location. Vessel scuttling is not allowed within the boundaries of the Olympic Coast National Marine Sanctuary. Intentionally sinking any non-vessel debris is prohibited.
8. In the event that a large item interferes with port operations or is in a navigation channel, the U.S. Army Corps of Engineers, in coordination with federal, state, and local agencies, may have jurisdiction and responsibility to provide assistance.
9. Funding for removal will rest primarily with the U.S. Coast Guard and in some instances, the U.S. Army Corps of Engineers.

4.E. VOLUNTEER COORDINATION AND MANAGEMENT

Lead Agency

Washington State Military Department, Emergency Management Division

Supporting Agencies

Washington State Department of Ecology

Washington State Parks and Recreation Commission

Washington Department of Enterprise Services

Marine Resource Committees

Non-Governmental Agencies

Volunteer Organizations

Goal

To recruit, train, coordinate and assign volunteer groups to specific cleanup tasks as requested.

Specific Tasks

1. Document existing volunteer organizations and networks currently conducting beach clean-ups on state and local government lands. Include information on contacts, funding, coordination, disposal arrangements, and other as needed.
2. As circumstances require, activate the Washington Conservation Corps (WCC) to assist with coordination, debris removal, and other needs. The WCC can supplement and support actions by volunteer organizations.
3. Activate the National Donations Management Network (NDMN), a Federal Emergency Management Agency sponsored web-based system focused on matching humanitarian needs with assistance resources, as a contingency to quickly rally volunteers in the event they are needed.
4. If demand for debris cleanup exceeds the resources available to existing volunteer networks and the NDMN is activated, register NDMN volunteers in the “Emergency Worker Program” per Washington Administrative Code 118-04.
5. The Washington State Parks and Recreation Commission will coordinate and manage marine debris assessment and cleanup along the outer coast.
6. Department of Enterprises Services works with Washington Volunteer Organizations Active in Disasters (WAVOAD) and can coordinate volunteers for debris cleanup.
7. See annex *State of Washington Tsunami Debris Volunteer and Donations Management Plan* for more details.

4.F. INVASIVE SPECIES

Lead Agency

Washington State Department of Fish and Wildlife

Supporting Agencies

National Oceanic and Atmospheric Administration

U.S. Coast Guard

U.S. Fish and Wildlife Services

Tribal Governments

Washington State Department of Ecology

Washington State Department of Natural Resources

Washington State Parks and Recreation Commission

Local Jurisdictions

Goal

Respond to reports of sizeable marine debris with living organisms to evaluate, identify, contain, and eradicate aquatic invasive species (AIS) before they can impact native ecosystems.

Specific Tasks

1. Lead AIS debris inspection and management on state and public lands and prioritizes safety for any AIS management incident.
2. Provide staff and equipment to assess, evaluate, and decontaminate suspected AIS-laden debris.
3. On federal lands, tribal lands, and for offshore debris, WDFW will assist with AIS debris inspection and management upon request.
4. Utilize the best science, existing knowledge, and contemporary experience in AIS management (e.g., Puget Sound marine tunicates and freshwater zebra/quagga mussels) for debris incidents.
5. Work collaboratively with state, regional, national, and international AIS colleagues to identify existing debris management protocols for offshore and shoreline conditions.
6. Depending on funding and resources, WDFW will lead the development and testing of new techniques and protocols for management of AIS in offshore and shoreline conditions.
7. Collect samples and photograph AIS-suspected organisms found on confirmed marine debris.
8. Utilize experts from the scientific community to positively identify debris-associated AIS organisms down to species taxonomic classification where possible.
9. Develop multi-jurisdictional program for comprehensive shoreline AIS assessment and monitoring.
10. When practical and appropriate, provide training to selected responders on AIS awareness and management.

11. Take actions to prevent debris with AIS from reaching the shoreline. Suggest protocols to contain or eradicate attached AIS prior to debris removal from water.
12. Manage AIS-infested debris using one or more of the following actions:
 - a. Containment: Prevent spread by debris breakup; dislodgement of attachments; release of AIS reproductive materials; and escape of secondary (e.g., crabs, limpets, worms, etc.) AIS.
 - b. Control: Reduce AIS population numbers as quickly as possible.
 - c. Eradication: Remove AIS for upland disposal or kill all debris-associated AIS in place.
13. See annex *Washington State Department of Fish and Wildlife Marine Debris Response Annex to Washington State Response Plan* for more details.

4.G. COMMUNICATIONS AND OUTREACH

Lead Agency

WA State Department of Ecology

Supporting Agencies

Washington State Department of Fish and Wildlife

Washington State Department of Health

Washington State Military Department, Emergency Management Division

Washington State Department of Natural Resources

Washington State Parks and Recreation Commission

Governor's Office of Indian Affairs

Washington State Commission on Asian Pacific American Affairs

Goal

Provide the first and best source of information about Japanese tsunami marine debris and its impacts on the Washington State coast. This includes providing effective risk-management communications and equipping citizens and stakeholders with the information they need to address issues associated with potential debris, including risks to human safety and spread of invasive species.

Specific Tasks

1. Establish and maintain communications network based on a tiered system (similar to a phone tree) for disseminating information.
2. Create communications strategy based on events and times of high public uses for Washington State's coastal beaches.
3. Coordinate outreach efforts, including developing Washington State-specific talking points on tsunami debris and other outreach materials (e.g., "who to call" flier, best practices for handling tsunami debris, etc.) using communications network and strategy.
4. Coordinate media communications among local, tribal and state sources, including developing and maintaining a media contact list, releasing information and materials based on communication strategy, monitoring media reports, responding to misinformation or rumors, and ensuring coordinated response to media inquiries.
5. Coordinate communication and outreach efforts with other states, NOAA and other federal partners, including Washington State contributions to Joint Information website (<http://disasterdebris.wordpress.com/about/>). This requires expanding core contacts group list and crafting a master list of state communicators, including a credible speakers list for public events, and coordinate the disposal sites with the volunteer work of the Coastal Marine Resource Committees.

6. Develop and maintain centralized Washington State website on tsunami debris that includes:
 - Key messages and links to other web resources (NOAA, Health, Ecology, other coastal states and communities);
 - How to volunteer; volunteers should register as emergency workers with their county and follow local jurisdiction guidelines for volunteer clean up of marine debris;
 - What to do if you find debris (including contact information about who to call);
 - Receptacle for facts and figures about what is going on in Washington State; and
 - “Myth busting” (or “setting the record straight”) information to correct misperceptions and faulty media reporting.
7. Keep local, tribal, state and federal elected officials informed to keep surprises to a minimum. This also will foster a network for information-sharing and updating the communications strategy.
8. Establish and maintain social media tools (blogs, Facebook, Flickr, Twitter, etc.).

ATTACHMENTS

ATTACHMENT A – DEFINITIONS AND ABBREVIATIONS

AIS: Aquatic Invasive Species

Class 1 Debris – Debris which can be carried by one person (mostly light floating debris such as Styrofoam).

Class 2 Debris – Debris which can be carried by two people (larger items such as refrigerators and televisions).

Marine Debris – Hazardous: Containers containing chemicals, oil, or radiological materials. These items are usually marked as such.

Marine Debris – Large: Items found onshore that are too big to be carried by one person.

Marine Debris – Offshore: Floating items large enough to create a hazard to navigation or recreational use.

Marine Debris – Small and Routine: Items typically removed during regular beach cleanup; includes items such as plastic and glass bottles, Styrofoam, floats, and fishing gear. These items are small enough for one person to carry.

Marine Debris – Tsunami: Debris directly-related to the March 11, 2011 Japan Tsunami.

Modeling: Use of data and software to estimate the movement of marine debris over time

Monitoring: Use of established protocols to track marine debris types and quantities at regular interval in selected beaches

NGO: Non-governmental Organizations

NOAA: National Oceanic and Atmospheric Administration

Outreach: Communications and messaging for public to the public regarding marine debris issues.

SCA: Seashore Conservation Area

Volunteer Organizations: Non-profit organizations that routinely conduct beach clean-ups.

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ATTACHMENT B – NOAA SHORELINE MONITORING PROGRAM

1. Brief Overview of the NOAA Marine Debris Program Shoreline Survey

Introduction

Marine debris monitoring programs are necessary to compare debris sources, amounts, locations, movement, and impacts. The NOAA has developed standardized marine debris shoreline survey protocols to facilitate regional and site-specific comparisons. To evaluate deposition of the Japan tsunami marine debris, NOAA collaborates with a number of partners, and supports survey of over 30 sites along the West Coast.

Types of Shoreline Surveys

There are two main types of shoreline surveys: accumulation and standing-stock surveys.

- Accumulation studies provide information on the rate of deposition (flux) of debris onto the shoreline. These studies are more suited to areas that have beach cleanups, as debris is removed from the entire length of shoreline during each site visit. This type of survey is more labor-intensive and is used to determine the rate of debris deposition (# of items per unit area, per unit time). Accumulation studies can also provide information about debris type and weight. These surveys cannot be used to measure the density of debris on the shoreline because removal of debris biases the amount of debris present during subsequent surveys.
- Standing-stock studies provide information on the amount and types of debris on the shoreline. Debris within discrete transects at the shoreline site is tallied during standing-stock surveys. This is a quick assessment of the total load of debris and is used to determine the density (# of items per unit area) of debris present. Debris density reflects the long-term balance between debris inputs and removal and is important to understanding the overall impact of debris.

Table 1. Salient characteristics of standing-stock and accumulation surveys.

CHARACTERISTIC	STANDING-STOCK	ACCUMULATION
Debris removed during surveys?	No	Yes
Time required per survey	Less	More
Length of shoreline site	100 m	100 m or longer
Is a set survey interval required (e.g., once per week or per month)?	Yes	Yes
Types of data that can be collected	<ul style="list-style-type: none"> ▪ Debris density (# of items / unit area) ▪ Debris material types 	<ul style="list-style-type: none"> ▪ Debris deposition rate (# of items / unit area / unit time) ▪ Debris material types ▪ Debris weight

Shoreline Survey Data

Marine debris monitoring groups will collaborate with NOAA to compile their survey results. The NOAA will collect all the survey results data, store it in a database, analyze the data, and share it with its partners and the public.

If you would like more information on the shoreline monitoring program, please send an email to MD.monitoring@noaa.gov.

2. Specific Site Selection Criteria for Washington State

- Relatively low public usage
- Sandy beach or pebble shoreline
- Clear, direct, year-round access
- No breakwaters, jetties, or other disruptions to nearshore circulation
- Beach area at least 100 m in length parallel to the water
- No regular cleanup activities – or coordinate with events
- Landowner / manager permission
- Accessibility
- Recreational use
- Threatened or endangered species or habitat
- Closures
- National Environmental Policy Act (NEPA) concerns
- Proximity to headquarters and other survey sites
- Similarity to other locations – e.g. unique physical or geographic attributes or patterns of recreational use (better not to have unusual characteristics)

3. Contacts for Marine Debris Shoreline Monitoring

Pacific County Marine Resource Committee

- Mike Johnson, paccon@willapabay.org

Grays Harbor County Marine Resource Committee

- Garrett Dalan, gdalan@co.grays-harbor.wa.us

North Pacific Coast Marine Resource Committee

- Rich Osborne, rosborne@wcssp.org

Olympic Coast National Marine Sanctuary

- Liam Antrim, liam.antrim@noaa.gov

NOAA Marine Debris Program

- Sherry Lippiatt, sherry.lippiatt@noaa.gov

Indian Tribes and Nations

- Hoh Tribe
- Makah Tribe, Dana Sarff, sarff.dana@centurytel.net
- Quinault Nation – TBD
- Shoalwater Bay Tribe - TBD

National Park Service

- Steven Fradkin, steve_fradkin@nps.gov
- Bill Rohde, Bill_Rohde@nps.gov

U.S. Fish and Wildlife Service

- Tom McDowell, tom_mcdowell@fws.gov

WA State Dept. of Fish and Wildlife Region 6 Coastal Shellfish Unit

- Dan Ayers, Daniel.ayers@dfw.wa.gov

Nisqually National Wildlife Complex

- Jean Takekawa, jean_takekawa@fws.gov

Washington Maritime NWR Complex

- Kevin Ryan, Kevin_ryan@fws.gov

Willapa National Wildlife Refuge

- Jackie Ferrier, Jackie_ferrier@fws.gov

NGOs

- Surfrider Foundation, Jody Kennedy, JKennedy@surfrider.org
- The Nature Conservancy, Eric Delvin, edelvin@tnc.org

WA Sea Grant

- Jim Brennan, jbren@u.washington.edu
- Ian Miller, Imiller@u.washington.edu

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ATTACHMENT C – NOAA JAPAN TSUNAMI MARINE DEBRIS MODELING

Lead Agency

National Oceanographic and Atmospheric Administration (NOAA)

Supporting Agencies and Organizations

NOAA's

Office of Response and Restoration

Marine Debris Program

Emergency Response Division

National Center for Environmental Prediction

Office of Oceanic and Atmospheric Research

National Environmental Satellite, Data and Information Service

National Marine Fisheries Service

U.S. Navy

University of Washington¹

Oregon State University

University of Hawaii

University of Kyoto

Goal

Predict the movement of the Japan tsunami marine debris over space and time, and provide this information to decision makers and the public to inform planning efforts for debris management and response as well as minimization of economic and environmental impacts.

Objectives

- Use state-of-the-art technology and knowledge to provide modeling output
- Communicate results to stakeholders (decision makers, media, public)
- Update modeling output regularly
- Inform modeling results and efforts with at-sea observations
- Encourage reporting of major/significant debris sightings
- Present model outputs and efforts to the public to effectively increase understanding of debris movement

Specific Tasks

1. Communicate and coordinate with monitoring and removal groups to clarify their needs from modeling outputs in terms of frequency and accuracy in time and space.
2. Assemble, synthesize and prioritize potential modeling actions, including clear information on what could be done (deliverables) when (timeline) and what would be needed (resources).

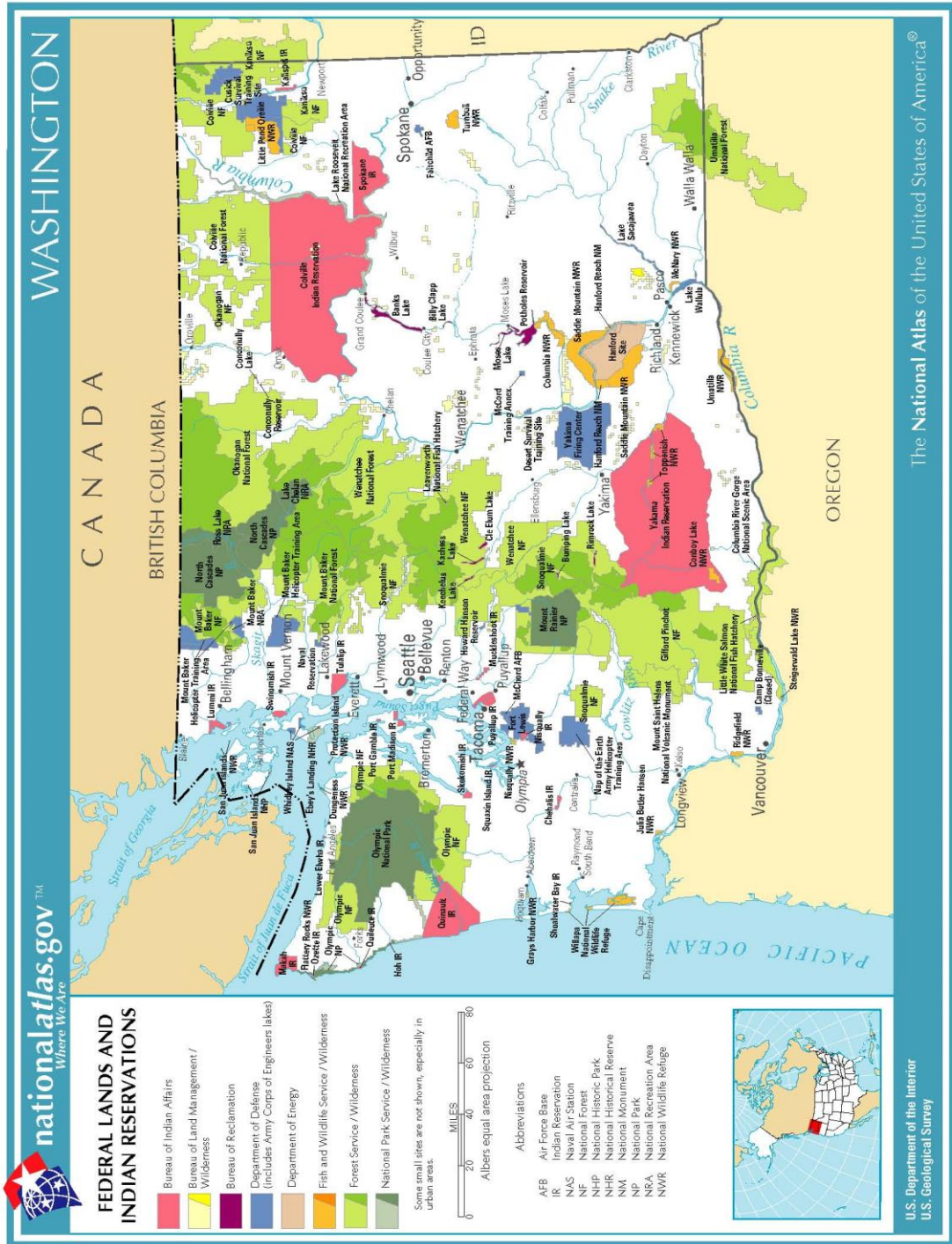
• ¹ Universities throughout the United States have been consulted for opportunity to provide input to the modeling approach. The universities listed here have been active in their own modeling efforts.

3. Work with regional modelers to identify information they need to receive from monitoring and removal activities fields, format, and frequency of data receipt.
 - a. Coordinate with monitoring and sighting group on process/mechanisms to receive necessary information.
4. Communicate modeling capabilities, limitations and outputs to public, stakeholders and operational groups. These outputs will inform operational planning, and also build public understanding of the process.

References

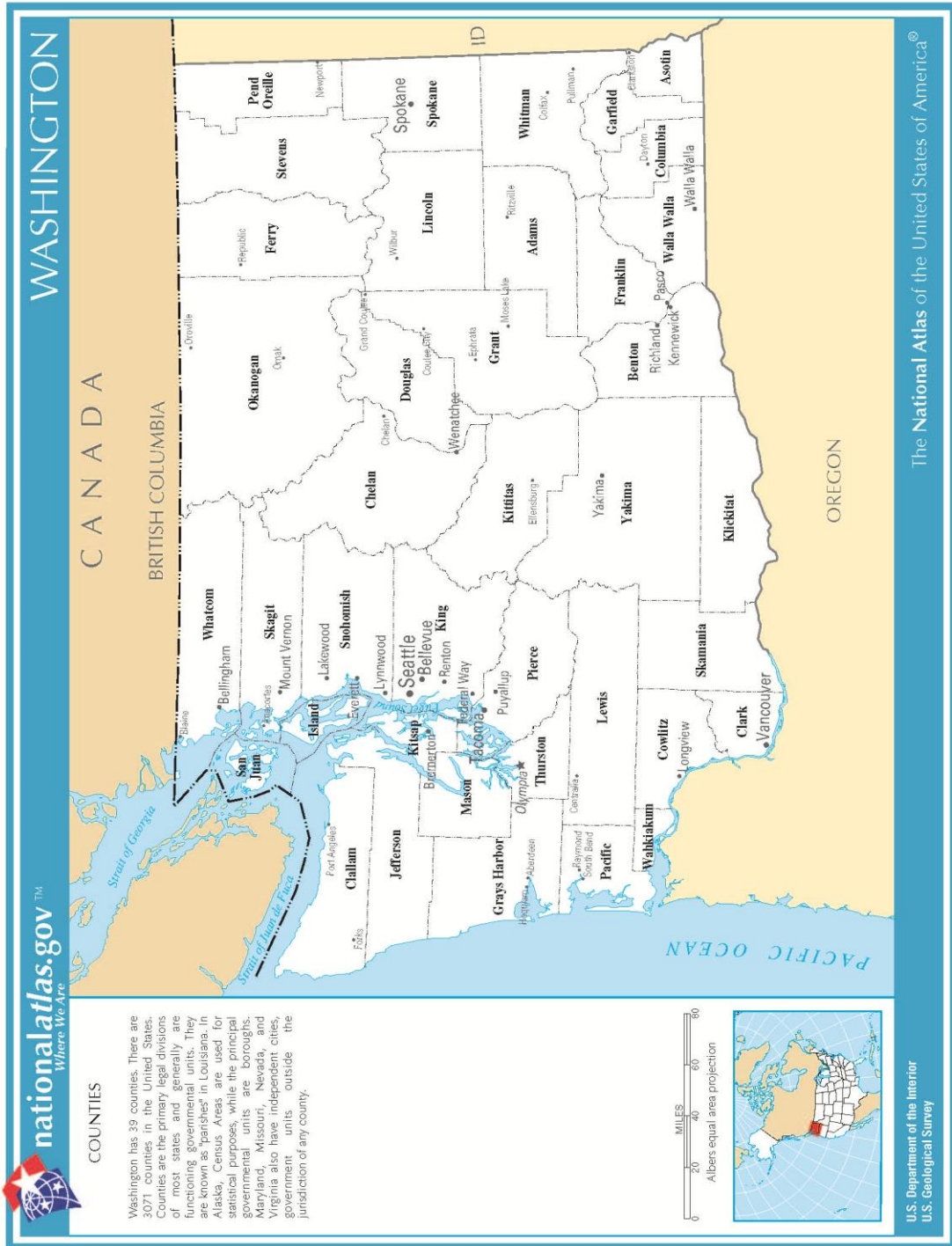
1. GNOME
 - a. Tsunami Debris Modeling_GNOME_20120320.pdf - Description of GNOME modeling effort approach
 - b. JTMD GNOME Model Graphic 04-18-12.pdf – Example GNOME visualization
2. SCUD
 - a. SCUD_Manual.pdf – Paper description of University of Hawaii International Pacific Research Center SCUD model
3. OSCURS
 - a. Getting to Know OSCURS.pdf – Introduction to OSCURS model technique and applications.
4. Detection
 - a. JTMD_ERMA_20120421.pdf – Output of voluntary sightings to date, along with confirmed monitoring sites and satellite detection areas, centralized in the Emergency Response Management Application (ERMA).

ATTACHMENT D – MAP OF FEDERAL-OWNED LANDS



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ATTACHMENT E – MAP OF WASHINGTON STATE COUNTIES



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ATTACHMENT F – ADDITIONAL INFORMATION AND RESOURCES

Report Debris Sightings to NOAA: DisasterDebris@noaa.gov

And Call: 1-855-WACOAST (1-855-922-6278)

Report Oil Spills or Hazardous Materials: 1-855-WACOAST

On federal or tribal land call: 1-800-424-8802

Report Aquatic Invasive Species: <http://www.wdfw.wa.gov/ais/reporting/>

And Call: 1-888-WDFWAIS (1-888-933-9247)

Washington State Department of Ecology

http://www.ecy.wa.gov/news/2012/itn01_debris.html

Washington State Department of Health

<http://www.doh.wa.gov/Emergencies/EmergencyPreparednessandResponse/FukushimaUpdate/TsunamiDebrisFAQ.aspx>

Washington State Department of Fish and Wildlife

<http://www.wdfw.wa.gov/tsunami/>

Japan Tsunami Marine Debris Joint Information Center (JIC)

<http://disasterdebris.wordpress.com/about/>

NOAA Marine Debris Program

<http://marinedebris.noaa.gov/tsunamidebris/>

NOAA Shoreline Monitoring Program:

<http://marinedebris.noaa.gov/tsunamidebris/monitoring.html>

NOAA Modeling Program

http://marinedebris.noaa.gov/tsunamidebris/debris_model.html

Government of Japan Frequently Asked Questions

http://www.kantei.go.jp/jp/singi/kaiyou/hyouryuu/qanda_eng.html

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ANNEXES – STATE AGENCY, GROUP-SPECIFIC AND COUNTY PLANS

These Annexes are state agency, group-specific and county plans that support the Washington State Marine Debris Response Plan and are published separately.

- **Tsunami Debris Volunteer and Donations Management Plan**
State of Washington
- **WDFW Marine Debris Response Annex to Washington State Response Plan**
Washington Department of Fish and Wildlife
- **Cultural Heritage Workgroup Work Plan and Outreach Strategy**
State of Washington

END OF DOCUMENT